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ABSTRACT

This report provides some guidance and materials that could be useful to those considering planning and conducting a curriculum demonstration day in a local school. These materials were used successfully in ERIE's pilot school, and they demonstrate a fully implemented elementary school science curriculum. Included in the document are a checklist of tasks for planning and conducting a demonstration day, sample letters of invitation, sample programs, sample evaluation forms for participants, a followup assessment plan, and a list of outside resources useful in the planning of a curriculum demonstration day. (RA)

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Program Report 107

How to Plan a Curriculum Demonstration Day

James M. Mahan

January 1970

Eastern Regional Institute for Education
635 James Street
Syracuse, New York 13203

EA 004 428

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FOREWORD

The Eastern Regional Institute for Education (ERIE), a regional educational laboratory supported by the Office of Education, is dedicated to the promotion of process-oriented education in the nation's schools. In one program, the Institute is helping elementary schools with the installation of process-oriented science curricula. Concurrently, the Institute is working with other agencies to develop strategies to promote the widespread adoption of process curricula.

In 1967 the Institute introduced Science--A Process Approach, an innovative science curriculum developed by the American Association for the Advancement of Science, in 21 pilot schools in New York and Pennsylvania. The impact of this curriculum installation became apparent when personnel from non-pilot school districts and educational agencies inquired about the program and requested opportunities for on-site visits. In response to this interest, ERIE influenced the organization of 14 curriculum demonstration days during the 1968-69 school year. The accomplishment required the leadership and collaboration of classroom teachers, school principals, and regional Title III personnel. The 14 "days" attracted more than 1400 teachers and administrators who came to see Science--A Process Approach presented "live" to elementary school children during regular

instructional time. The visitors were inquisitive, discussing with pilot school personnel the characteristics, challenges, and rewards of process science. Many participants were instrumental later in implementing plans for classroom tryouts of Science--A Process Approach in their school districts, for promoting attendance at summer inservice education workshops, and for procurement of related hardware and software.

The purpose of this report is to provide guidance and materials useful in planning and conducting a curriculum demonstration day in the local school. The materials were used successfully in ERIE's pilot schools. Consequently, they reflect the focus on Science--A Process Approach.

Acknowledgements

A number of forms, letters, schedules, and other materials prepared and used by school and agency personnel are presented on the blue pages in this volume. The Institute acknowledges and cordially thanks the schools and agencies listed below for permission to share their materials with educators contemplating demonstration day programs.

Schools

Allegheny County Schools
345 County Office Bldg.
Pittsburgh, Pennsylvania 15219
Fred C. Krause
Assistant Superintendent

Acknowledgements (cont'd)

Calvin U. Smith School
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Painted Post, New York 14870
Donald Mahon, Principal

C.C. Ring Elementary School
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Jamestown, New York 14701
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J. Henry Cochran Elementary School
1500 Cherry Street
Williamsport, Pennsylvania 17701
John E. Dice, Principal

Maple Elementary School
1500 Maple Road
Williamsville, New York 14221
Thomas Ahern, Principal

Overlook Elementary School
Meadowgreen Drive
Pittsburgh, Pennsylvania 15236
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Ticonderoga Elementary School
Alexandera Avenue
Ticonderoga, New York 12883
Mabel Hornburg, Principal

Washington Elementary School
Sunbury Street
Shamokin, Pennsylvania 17872
Lyman Weaver, Principal

Westmere Elementary School
Johnston Road
Albany, New York 12303
James Cleary, Principal

Acknowledgements (cont'd)

Title III Agencies

Capital District Regional Supplementary
Education Center
815B Central Avenue
Albany, New York 12206
Donald Hess, Director
Charles A. Ebetino, Curriculum Specialist

Northeast Regional Supplementary Education
Center
8 South Platt Street
Plattsburgh, New York 12901
Joseph Allen, Director
W. Harvey Davey, Associate Director

Project Innovation
27 California Drive
Williamsville, New York 14221
Robert Lamitie, Director
Jack Hanssel, Assistant Director

WHY PLAN A CURRICULUM DEMONSTRATION DAY?

Innovative curricula must battle in the educational marketplace for the acceptance, loyalty, and fiscal resources of various educational consumers. Teachers and administrators learn about innovative instructional materials, methods, and objectives through professional journals, professional contacts, professional meetings, and in various other ways. But knowledge alone seldom seems to provide school personnel sufficient impetus for discarding routine, comfortable, old approaches to instruction in favor of a different, challenging, emergent curriculum still unevaluated in terms of personal experience.

Most educators desire to view a new instructional product in action--to see its proponents and early implementers "do their thing." They pose a question similar to the one asked by many American citizens when they first heard about the innovation known as the automobile: "Will that contraption really run?" Automobile agencies still employ "demonstrator" vehicles to motivate consumers to make purchases, to change models. "Seeing is believing" remains an important tenet in the decision-making process. Demonstrator models are necessary in the world of the school, as well as in the world of the automobile. Several educators, concerned with the problems of promoting educational innovation during a half century characterized by bewildering

social and technological change, stress the importance of demonstrating new curricula in action. Henry Brickell(1) comments:

> The only way to judge a new program is to visit it. ...It is necessary to go directly into the classrooms and watch the behavior of the students as they receive the instruction. A talk with the teacher afterward is helpful. A talk with students can be even more revealing. ...Recommended new programs must be demonstrated in schools quite similar to those from which visitors come.

Clark and Guba(2) identify demonstration as an essential component of a classification scheme of processes necessary for educational change. They point out that demonstration provides an opportunity for potential users to examine and assess operating qualitities of the invention. Through examination and assessment, conviction about the innovation is developed. Change agencies and local school district demonstration centers should collaborate to form networks for expanded programs of direct demonstration of innovations(3).

While discussing PSSC Physics, Marsh(4) underscores the importance of the observation of curriculum results in classroom situations and the value of exchanges of opinion with fellow teachers.

Rogers and Svenning(5) state that:

> Communication between schools about innovations tends to be limited. Teachers rarely have the opportunity to visit other schools while they are in session to see innovations in actual operation. This is particularly difficult in rural areas where schools are often quite far apart. ...Teachers sent to other school systems for observation often return with new enthusiasm, which they may impart to other faculty members.

Classroom teachers are the ultimate implementers of any instructional program--they collect and arrange the materials, plan the learning experiences, monitor student activity, field student questions, evaluate the learner's achievement, re-teach if necessary, and plan again for tomorrow. Since the teacher is the one who knows most about the operating characteristics of a curriculum, she should be given a leadership opportunity to disseminate a good program beyond the walls of her classroom.

Innovative teachers in elementary schools implementing new process-oriented curricula, e.g., Science--A Process Approach, are a powerful and under-utilized force for the dissemination of new instructional methods. Fellow teachers are interested in seeing innovative teachers at work with new materials in a regular classroom setting with average pupils. When visitors are convinced that a new program really "works," they return home willing to try similar methods. It is for this reason in particular that curriculum demonstration days conducted by teaching staffs and the principal are a most important means for the dissemination of educational change.

References

1. Henry M. Brickell, Organizing New York State for Educational Change. Albany: The State Education Department, 1961, p. 28.

References (cont'd)

2. David L. Clark and Egon G. Guba, An Examination of Potential Change Roles in Education. (Seminar on Innovation in Planning School Curricula) October 1965, p. 8.

3. Clark and Guba, 1965, p. 29.

4. Paul E. Marsh, "Wellsprings of Strategy; Considerations Affecting Innovations by the PSSC." in Innovation in Education. Matthew B. Miles, New York: Teachers College, Columbia University, 1964.

5. Everett M. Rogers and Lynne Svenning, Change in Small Schools. Las Cruces, New Mexico: Education Resources Information Center Clearinghouse on Rural Education and Small Schools, New Mexico State University, 1969.

PLANNING A DEMONSTRATION DAY: IDEAS AND MATERIALS

Careful planning is essential to an effective, well-attended demonstration day. The program should offer visitors a variety of opportunities to learn about the new curriculum and the school's experiences with it. Participants will want to inspect the materials; they will want to observe teachers in the classroom; they will want to discuss the curriculum with involved teachers and administrators.

To assist the planner, ERIE has brought together in the sections following the ideas and materials used in conducting 14 demonstration days for Science--A Process Approach. The first section is a checklist of tasks and and personnel responsible for completing tasks--the host school, the regional agency, the host principal, the host staff, the participants, and the speaker.

Sufficient advance planning and information are essential to insure maximum participation. Letters of invitation should be designed to stimulate the active interest of the recipient. This is presented in the second section below.

Visitors should be requested to evaluate the demonstration day experience. Evaluation is treated in the third section; the final section is a brief discussion of follow-up assessment.

Checklist of Tasks for Planning and Conducting a Demonstration Day

Key:	Responsible Party for Checklist of Tasks
School	elementary school conducting the demonstration day program
Agency	any change agency or intermediate agency (i.e. regional Title III Center, Board of Cooperative Educational Services, School Study Council, etc.) publicizing a demonstration day and assisting in its implementation and evaluation
Principal	principal of the school conducting the demonstration day
Staff	teachers demonstrating the innovative curriculum to participants
Participants	teachers, administrators, and other educators attending the demonstration day program
Speaker	science professor or outside consultant serving as "keynoter" or resource person at request of principal and his staff

TASKS	RESPONSIBLE PARTY
___Consider rationale for demonstration day	principal, staff, agency
___Secure voluntary cooperation of staff	principal
___Secure coordinated supportive efforts of the change agency (i.e., Title III)	principal
___Collaborate with teachers to construct a demonstration day schedule	principal
___Include a variety of realistic instructional experiences	principal, staff
___Determine enrollment, length of program, lunch hours and prices, etc.	principal

Checklist of Tasks (cont'd)

TASKS	RESPONSIBLE PARTY
___Give agency logistical facts to include in publicity	principal
___Arrange for speaker presence if desired by principal	agency
___Prepare (obtain) one descriptive article or brochure for advance distribution to participants	agency
___Mail invitational brochures at least 3 weeks in advance, handle publicity and construct registration forms, mail forms	agency
___Mail above mentioned brochure to registrants (in advance)	agency
___Arrange for newspaper or television publicity	agency (or school)
___Prepare list of registrants	agency
___Prepare an agendum (schedule) for distribution to participants	principal
___Prepare detailed lesson plans for instructional sessions to be observed	staff
___Prepare a demonstration day evaluation form	agency, principal
___Welcome participants, explain demonstration day schedule, distribute agendum, provide map of the school	principal
___Require participants to sign visitors log, indicate their school and district	principal
___Teach before visitors, handle questions, encourage dialogue	staff

Checklist of Tasks (cont'd)

TASKS	RESPONSIBLE PARTY
___Hold a "de-briefing" for all participants	principal, staff, agency, speaker
___Distribute "take home" handouts (program descriptions, prices, teacher reactions, etc.)	principal
___Evaluate the demonstration day	participants
___Provide stipend for speaker	agency
___Thank staff and agency for for demonstration day efforts	principal, agency
___File copy of visitors log	agency
___Score and analyze evaluation forms	agency
___Investigate regional "spin off" from demonstration day	agency

The Letter of Invitation

Advance information or "advertising" is essential to insure maximum participation. The letter of invitation should be designed to stimulate the active interest of the recipient.

Regional Title III Centers and ERIE collaborated in 1968-69 to help innovative schools conduct demonstration day programs. Letters of invitation were mailed by Title III Regional Center personnel to elementary school principals, teachers, science supervisors, and selected central office administrators.

Three sample letters, along with registration forms, are included below to guide schools and agencies interested in conducting a demonstration day program.

SAMPLE LETTER OF INVITATION 1

EASTERN REGIONAL INSTITUTE FOR EDUCATION
635 JAMES STREET, SYRACUSE, N.Y. 13203
TELEPHONE 474-5321 AREA CODE 315

October 21, 1968

To: Elementary School Principals and Teachers, Science Supervisors and Coordinators, and Central Office Administrators of the Capital Area

From: Capital District Regional Supplementary Education Center and Eastern Regional Institute for Education

Subject: Westmere Elementary School (Guilderland School System) Demonstration and Diffusion Day for Science--A Process Approach

The Eastern Regional Institute for Education (ERIE), one of 20 regional educational laboratories created under Title IV of the 1965 Elementary and Secondary Education Act, has installed an inquiry oriented, process based science curriculum in grades K-3 in 21 elementary schools in New York and Pennsylvania. There is a commitment to extend the installation through grade 6 in these 21 schools of diverse characteristics by 1970. Science--A Process Approach, developed by the American Association for the Advancement of Science, is the innovative curriculum now being implemented by the 21 pilot schools. This curriculum reflects the current concern in education for the learning processes which surround or facilitate the acquisition and utilization of knowledge both today and tomorrow. Science--A Process Approach is founded upon the premise that the highest form of content is "process" and that knowledge is not a data bank of facts, but a "system" for learning. Children engage in classroom activities directly related to such investigative skills as observing, using space/time relationships, using numbers, measuring, classifying, communicating, predicting, inferring, formulating hypotheses, controlling variables, interpreting data, defining operationally, and experimenting. Student achievement within this science curriculum is assessed through application of the conceptual framework of behavioral objectives--another very current development in American education.

ERIE has received numerous requests for information about Science--A Process Approach, for suggestions as to sources of in-service training of teachers, and for opportunities to see the curriculum in normal use in a typical elementary school.

Letter 1 (Cont'd)

Efforts are underway to schedule Demonstration and Diffusion Days in several of the pilot schools between now and May 1. Westmere Elementary School has volunteered to host visitors on two days, December ___ and December ___.

ERIE feels that process approach is a major educational innovation with great potential for American boys and girls. The Capital District Regional Supplementary Education Center shares that belief. In the past, the two agencies have co-sponsored a meeting in the Capital area to describe the characteristics of Science--A Process Approach. Through collaborative efforts, ERIE and the Capital District Regional Supplementary Education Center hope to forge the linkages or connections of cooperation between and among educational agencies so that school districts may learn more quickly of promising innovations and may assess them in a natural setting.

One notes that Clark and Guba call for demonstration of operational innovations as one of a series of processes necessary for change in education. Opportunities to examine and assess operating qualities are provided through demonstration. Often observer conviction is developed or strengthened.

Henry Brickell in Organizing New York State for Education Change has strongly emphasized:

> "The only way to judge a new program is to visit it. -----It is necessary to go directly into the classrooms and watch the behavior of the students as they receive the instruction. A talk with the teacher afterward is helpful. A talk with students can be even more revealing. -----Recommended new programs must be demonstrated in schools quite similar to those from which visitors come."

If you think Westmere Elementary School is sufficiently comparable to your elementary school, Westmere hereby invites you and your team to visit from 8:30 a.m. to 3:30 p.m. on Demonstration and Diffusion Day. Mr. James Cleary, Principal, will plan a visitation schedule providing for:

a. Observations of "regular" Science--A Process Approach lessons taught in grades K-3 just as they are taught every day at Westmere.
b. An opportunity to talk to, or question, each teacher observed.
c. An opportunity to question the pupils observed.

Letter 1 (Cont'd)

d. Inspection of science kits and teacher guides that are a component of the curriculum.
e. An opportunity to witness the administration of a competency measure (unit test).
f. Plenty of time to question the principal about the program (time, costs, relation to total curriculum, in-service training requirements, etc.).
g. A short talk by a professor of science education on "process" as content, and pre-service and in-service training.
h. Comments on the psychological and philosophical undergirdings of the curriculum.
i. A give-and-take session between visitors, principal, and several teachers.
j. A well-written summary article on Science--A Process Approach to be taken home.
k. Lunch in the school cafeteria.

Educators interested in elementary school science curriculum change are encouraged to spend a day at Westmere observing, inferring, formulating hypotheses, and interpreting data relative to process science. The day should permit some preliminary judgments about the educational significance of this curriculum for the learner, and the feasibility of its installation into your own school setting.

Factual information needed to organize the "Day" in the most satisfactory manner for visitors is requested on the registration form enclosed. You will notice that "team" attendance is strongly encouraged. An exemplary article on Science--A Process Approach will be forwarded for your professional reading after your registration is received. The article will make the visitation much more meaningful and will motivate a series of important questions to be directed toward the Westmere faculty.

Sincerely yours,

Charles A. Ebetino

James M. Mahan

/eh
Encl.

SAMPLE LETTER OF INVITATION 2

PROJECT INNOVATION
27 California Drive
Williamsville, New York 14221

TO: Elementary School Principals, Teachers, Science Supervisors, Coordinators and Central Office Administrators of the Western New York area.

FROM: Project Innovation and Eastern Regional Institute for Education (E.R.I.E.).

SUBJECT: Maple Road Elementary School, Williamsville Central Schools and C.C. Ring Elementary School, Jamestown Public Schools Demonstration and Diffusion Day for Science--A Process Approach.

DATE: November 15, 1968

The Eastern Regional Institute for Education (ERIE), one of 20 regional educational laboratories created under Title IV of the 1965 Elementary and Secondary Education Act, has installed an inquiry oriented, process based science curriculum in grades K-3 in 21 elementary schools in New York and Pennsylvania. There is a commitment to extend the installation through grade 6 in these 21 schools of diverse characteristics by 1970. Science--A Process Approach, developed by the American Association for the Advancement of Science, is the innovative curriculum now being implemented by the 21 pilot schools. This curriculum reflects the current concern in education for the learning processes which surround or facilitate the acquisition and utilization of knowledge both today and tomorrow. Science--A Process Approach is founded upon the premise that the highest form of content is "process" and that knowledge is not a data bank of facts, but a "system" for learning. Children engage in classroom activities directly related to such investigative skills as observing, using space/time relationships, using numbers, measuring, classifying, communicating, predicting, inferring, formulating hypotheses, controlling variables, interpreting data, defining operationally, and experimenting. Student achievement within this science curriculum is assessed through application of the conceptual framework of behavioral objectives - another very current development in American education.

Letter 2 (Cont'd)

ERIE has received numerous requests for information about Science--A Process Approach, for suggestions as to sources of in-service training of teachers, and for opportunities to see the curriculum in normal use in a typical elementary school.

On Thursday, December 12, 1968 two of the pilot schools in Western New York have scheduled Demonstration and Diffusion Days. They are the Maple Road School in Williamsville and the C.C. Ring School in Jamestown.

ERIE feels that process approach is a major educational innovation with great potential for American boys and girls. Project Innovation shares shares that belief. Through collaborative efforts ERIE and Project Innovation hope to forge the linkages or connections of cooperation between and among educational agencies so that school districts may learn more quickly of promising innovations and may assess them in a natural setting.

If you think Maple Road Elementary School in Williamsville or C.C. Ring School in Jamestown are sufficiently comparable to your elementary school, they hereby invite you and your team to visit from 9:30 a.m. to 3:30 p.m. on Thursday, December 12, 1968. Mr. Thomas Ahern from Maple Road Elementary School in Williamsville and Mr. John Carlson from C.C. Ring in Jamestown have planned the following program:

a. Observations of "regular" Science--A Process Approach lessons in grades K-3 taught as they are taught every day.
b. An opportunity to talk to, or question, each teacher observed.
c. An opportunity to question the pupils observed.
d. Inspection of science kits and teacher guides that are a component of the curriculum.
e. An opportunity to witness the administration of a competency measure (unit test).
f. Plenty of time to question the principal about the program (time, costs, relation to total curriculum, in-service training requirements, etc.).
g. A short talk by a professor of science education on "process" as content, and pre-service and in-service training.
h. Comments on the psychological and philosophical undergirdings of the curriculum.
i. A give-and-take session between visitors, principal, and several teachers.

Letter 2 (Cont'd)

j. A well-written summary article on Science--A Process Approach to be taken home.
k. Lunch in the school cafeteria.

Educators interested in elementary science curriculum change are encouraged to spend a day at either Maple Road School in Williamsville or C.C. Ring School in Jamestown observing, inferring, formulating hypotheses, and interpreting data relative to process science. The day should permit some preliminary judgments about the educational significance of this curriculum for the learner, and the feasibility of its installation into your own school setting.

Factual information needed to organize the "Day" in the most satisfactory manner for visitors is requested on the registration form enclosed. You will notice that "team" attendance is strongly encouraged. An exemplary article on Science--A Process Approach will be forwarded for your professional reading after your registration is received. The article will make the visitation much more meaningful and will motivate a series of important questions directed to the faculties of Maple Road and C.C. Ring schools.

Very truly yours,

Jack Hanssel
Assistant Director
Project Innovation

James M. Mahan
Director
Process Curriculum Installation Program
Eastern Regional Institute for Education

JH/mae
enclosure

Letter 2 (Cont'd)

DEMONSTRATION AND DIFFUSION DAY
FOR SCIENCE--A PROCESS APPROACH
DATE - DECEMBER 12, 1968

Name of School District: _____

Names of People Attending the Demonstration Day:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Name of School at which you want to observe (Please check one)

1. Maple Road School (Williamsville) _____
2. C.C. Ring School (Jamestown) _____

Please return this form in the self addressed envelope to Project Innovation, 27 California Drive, Williamsville, New York, 14221, by MONDAY, DECEMBER 2, 1968.

SAMPLE LETTER OF INVITATION 3

ALLEGHENY COUNTY SCHOOLS
345 County Office Building
Pittsburgh, Pennsylvania 15219

TO: Chief School Administrators
Elementary Principals

FROM: Fred C. Krause, Assistant Superintendent

SUBJECT: DEMONSTRATION DAY FOR SCIENCE--A PROCESS APPROACH

DATE: February 10, 1969

Recently Project SENARAC-R of the Allegheny County Schools conducted a Share the Wealth program with the Bethel Schools in which Science--A Process Approach was demonstrated. A number of schools have expressed further interest in this particular type of science curriculum.

The Eastern Regional Institute for Education (ERIE), one of 20 regional educational laboratories created under Title IV of the 1965 Elementary and Secondary Education Act, has installed an inquiry-oriented, process-based science curriculum in grades K-3 in 21 elementary schools in New York and Pennsylvania. There is a commitment to extend the installation through grade 6 in these 21 schools of diverse characteristics by 1970. Science--A Process Approach, developed by the American Association for the Advancement of Science, is the innovative curriculum now being implemented by the 21 pilot schools. This curriculum reflects the current concern in education for the learning processes which surround or facilitate the acquisition and utilization of knowledge both today and tomorrow. Science--A Process Approach is founded upon the premise that the highest form of content is "process" and that knowledge is not a data bank of facts, but a "system" for learning. Children engage in classroom activities directly related to such investigative skills as observing, using space/time relationships, using numbers, measuring, classifying, communicating, predicting, inferring, formulating hypotheses, controlling variables, interpreting data, defining operationally, and experimenting. Student achievement within this science curriculum is assessed through application of the conceptual framework of behavioral objectives - another very current development in American education.

Letter 3 (Cont'd)

The Overlook Elementary School, Baldwin-Whitehall School District, is one of ERIE's 21 pilot schools. Mr. Howard C. Robertson, principal of the Overlook Elementary School has planned a one-day program providing for:

a. Observations of "regular" Science--A Process Approach lessons taught in grades K-4 as they are taught at Overlook School.
b. An opportunity tc talk to, or question, teachers who use the SAPA program.
c. An opportunity to question the pupils observed.
d. Inspection of science kits and teacher guides that are a component of the curriculum.
e. An opportunity to witness the administration of the competency measure (unit test).
f. Time to question the principal about the program (time, costs, relation to total curriculum, in-service training requirements, etc.).
g. Comments on the psychological and philosophical undergirdings of the curriculum.
h. A give and take session between visitors, principal, and several teachers.
i. A well-written summary article on Science--A Process Approach to be taken home.

The meeting will be held Wednesday, March 5, 1969, at the Overlook Elementary School, Meadowgreen Drive, Pittsburgh, Pennsylvania 15236. The meeting will begin at 9:30 a.m. and conclude at approximately 3:30 p.m. Lunch will be on your own. An article dealing with Science--A Process Approach will be forwarded after your registration is received. The article will make the visitation more meaningful and will motivate a series of important questions to be directed toward the Overlook Elementary School faculty.

Reservations should be returned before February 26, 1969.

Letter 3 (Cont'd)

- -

Return to: Dr. Fred C. Krause
Assistant Superintendent
Allegheny County Schools
345 County Office Building
Pittsburgh, Pennsylvania 15219

The following persons will attend the Science--A Process Approach conference to be held at the Overlook Elementary School, Baldwin-Whitehall School District, on Wednesday, March 5, 1969.

Name	Title	School Address
_____	_____	_____
_____	_____	_____
_____	_____	_____

_____
School District

/eh

The Program

It is important that the demonstration day program be a representative portion of the normal education routine. Visiting educators do not want to view solitary moments of educational inspiration. They look for a sound program operating in a steady, functional manner--in the manner it operated yesterday and will operate the day after tomorrow.

In ERIE's experience, the elementary school principal first presented the demonstration day concept to his faculty, seeking the voluntary assistance of teachers involved in the process-oriented science curriculum. Once the school staff expressed a desire to provide leadership for the dissemination of information about the curricular innovation, the principal became coordinator of the day's activities.

Programs varied widely from school to school. Each teaching staff, of necessity, operated within the space, time, equipment, and personnel restrictions of their own schools. Where educational television apparatus and operators were available, the day's agenda provided for video tape viewing of selected segments of Science--A Process Approach instruction and evaluation. Where cadet teachers, flexible team teaching, and available substitute teachers could be called upon, visitors had longer periods in which

to question the classroom teacher. The demonstration day program schedule was organized around cafeteria peak loads, bus schedules, and sometimes the appearance of the school superintendent or a local college professor. Schools designed programs compatible with school physical conditions and respectful of on-going instruction. Several sample program schedules are included below.

One word of caution. Feedback (via questionnaires) from demonstration day visitors tended to underscore the impact of observation of classroom teaching and free verbal interchange with classroom teachers. Both formal presentations by "outside experts" and excessive participation by representatives of educational change agencies were downgraded. In other words, school people came to observe fellow school people and to converse with fellow school people. They did not come to be lectured at or to discuss theoretical frameworks for educational change. They came to see and to get the facts from teachers for whom the new curriculum was an everyday classroom reality.

Sample Program 1

WESTMERE ELEMENTARY SCHOOL
GUILDERLAND CENTRAL SCHOOLS
December 10, 1968

8:30 - 8:45 AM	COFFEE.....CAFETORIUM			
8:45 - 9:15	WELCOME....James P. Cleary +Schedule +Introduction		Mr. Ebetino RSEC	Cafetorium ERIE
9:15 - 9:45	J. McGrath (St. Rose) Rm 154	Video Tape Rm 159	Slide J. Schaefer Stage	J. Cleary, Principal Rm 102
9:45 - 10:15	Mrs. Dechene Gd 2 (Palmer)	James P. Cleary Principal Rm 102	Materials Outside 153	Miss Levine Gd 3 (Buchanan)
10:15 - 10:45	J. Cleary Principal Rm 102	J. McGrath (St. Rose) Rm 154	Miss Gadomski Gd 3 (Hammer)	F R E E (Buchanan)
10:45 - 11:15	Slide Proj J. Schaefer Stage	Mrs. Somerdin Gd 2 (Hall)	F R E E (Hammer)	J. McGrath (St. Rose) Rm 154
11:15 - 11:45	L U N C H	F R E E (Hall	J. Cleary Principal Rm 102	Materials Outside Rm 153
11:45 - 12:15		L U N C H	L U N C H	Video Tape Rm 159
12:15 - 12:45	Video Tape Rm 159			L U N C H
12:45 - 1:15	Mrs. MacMurray Gd 1 (Bode)	Slide Proj J. Schaefer	Mrs. Bielefeld Kdg (Esmay)	
1:15 - 1:45	F R E E (Bode)	Materials Rm 153	J. McGrath (St. Rose) Rm 154	Mrs. Swanson Kdg (Martin)
1:45 - 2:15	Materials Rm 153	Mrs. Spohr Gd 3 (Mrs. Robinson)	Video Tape Rm 159	Slide Proj. J. Schaefer Stage
2:30 - 3:15	P A N E L D I S C U S S I O N FOR Q U E S T I O N S: Mr. Ebetino ERIE Mr. McGrath Mrs. Parmenter Mrs. Swanson MR. CLEARY, Moderator CAFETORIUM			

Program 1 (cont'd)

WESTMERE ELEMENTARY SCHOOL
GUILDERLAND CENTRAL SCHOOLS
December 11, 1968

8:30 - 8:45 AM	COFFEE.....CAFETORIUM			
8:45 - 9:15	WELCOME.... James P. Cleary +Schedule +Introduction		Mr. Ebetino RSEC	ERIE CAFETORIUM
9:15 - 9:45	J. Cleary Principal Rm 102	Mrs. Buchanan Gd 2 (Martin	Video Tape Rm 159	Mrs. Robinson Gd 3 (Price)
9:45 - 10:15	Mrs. Parmenter Gd 3	Video Tape Rm 159	S L I D E P R E S E N T A T I O N J. Schaefer Stage	
10:15 - 10:45	F R E E (Levine)	Mrs. Bielefeld Kdg (Gadomski)	Mrs. Swanson Kdg (Hammer)	Video Tape Rm 159
10:45 - 11:15	Materials Outside Rm 153	F R E E (Gadomski)	F R E E (Hammer)	J. Cleary Principal Rm 102
11:15 - 11:45	L U N C H	Materials Outside Rm 153	J. Cleary Principal Rm 102	L U N C H
11:45 - 12:15		J. McGrath Rm 159	L U N C H	
12:15 - 12:45	J. McGrath Rm 159	L U N C H		Mrs. Dechene Gd 2 (Tweedie)
12:45 - 1:15	Mrs. Somerdin Gd 2 (Esmay)		Materials Rm 153	F R E E (Tweedie)
1:15 - 1:45	S L I D E P R E S E N T A T I O N J. Schaefer Stage		Mrs. Spohr Gd 3	J. McGrath Rm 159
1:45 - 2:15	Video Tape Rm 159	J. Cleary Principal Rm 102	J. McGrath Rm 143	Materials Rm 153
2:30 - 3:15	P A N E L D I S C U S S I O N Mr. Ebetino ERIE Mr. McGrath MR. CLEARY, Moderator		FOR Q U E S T I O N S: Mrs. Parmenter CAFETORIUM	Mrs. Bielefeld

SAMPLE PROGRAM 2

SCIENCE--A PROCESS APPROACH

Demonstration and Dissemination

Calvin U. Smith Elementary School

March 27, 1969

8:45 - 9:15	Registration and coffee - Cafetorium	
9:15 - 9:25	Welcome and introduction of speaker	
9:25 - 10:00	"The Process Approach" - Mr. Thomas Ahern Pilot School Principal Williamsville, N.Y.	
10:00 - 10:45	Classroom visits to observe program	
11:00 - 11:35	Film presentation	Groups K-1-2A Library Mr. Doppelt 2B-3-4 Conf. Room Mr. Watkins Miss Davis
11:40 - 12:15	Film presentation	Groups K-1-2A Conf. Room Mr. Watkins Miss Davis 2B-3-4 Library Mr. Doppelt
12:20 - 1:00	Lunch (gym)	
1:15 - 2:00	Classroom visits to observe program	
2:10 - 2:40	Observe competency measure - Cafetorium Mrs. Hamilton	
2:45 - 3:15	Teacher interviews	
3:15 -	Reaction session	

Program 2 (Cont'd)

CALVIN U. SMITH ELEMENTARY SCHOOL
S.A.P.A. OBSERVATION SCHEDULE
March 27, 1969

Kindergarten Room #101 - Mrs. Hayes - Observing 7

A.M. - Perception of Odor - Introduction & Activity 1 and 2

P.M. - Perception of Odor - Activity 3 and Generalizing Experience

Grade 1 - Observing 12 - Observing Color and Color Changes in Plants

A.M. - Room #103 - Mrs. Power - Introduction and Activity 1

P.M. - Room #102 - Mrs. Paris - Activity 2 and Generalizing Experience

Grade 2 - Classifying 8 - The Color Wheel - An Order Arrangement

A.M. - Room #104 - Mrs. Hamilton - Activity 1 and 2

P.M. - Room #106 - Miss Davis - Activity 4

Grade 3 - Communicating 11 - Describing Locations

A.M. - Room #117 - Mrs. Bovee - Introduction and Activity 1 and 2

P.M. - Room #115 - Mrs. DeSilva - Activity 3 and 4

Grade 4 - Defining Operationally 1 - Electric Circuit and Their Parts

A.M. - Room #114 - Mrs. Meyers - Introduction and Activity 1

P.M. - Room #116 - Mr. LeRay - Activity 2

SAMPLE PROGRAM 3

TICONDEROGA ELEMENTARY SCHOOL
Ticonderoga, New York
DEMONSTRATION AND DIFFUSION DAY

8:30 - 9:00	Registration - Coffee - Large Group Instruction Room			
9:00 - 9:15	Welcome by Mr. Simeon McIntyre			
9:15 - 9:45 Observe Lessons	Group 1A Mrs. Wiedenheft Group 1B Mrs. Bowers	Group 2A Mrs. Thompson Group 2B Mrs. Stevenson	Group 3A Miss Delorm Group 3B Mrs. Moore	Group 4A Mrs. McLean Group 4B Mrs. Martzinek
9:45 - 10:15 Conferences with Teachers	Groups 1A, 1B Vacant room in Kindergarten	Groups 2A, 2B Large group Instruc. Room	Groups 3A, 3B Resource Center	Groups 4A, 4B Science Room
10:15 - 10:45 Observe Lessons	Group 3A Mrs. McDonald Group 3B Mrs. Clancy	Group 4A Miss Forcier Group 4B Mrs. Barber	Group 1A Mrs. Trainer Group 1B Mrs. Wood	Group 2A Mrs. Hendrix Group 2B Mrs. Valentine
10:45 - 11:15 Conferences with Teachers	Groups 3A, 3B Vacant room in Kindergarten	Groups 4A, 4B Large Group Instruc. Room	Groups 1A, 1B Resource Center	Groups 2A, 2B Science Room
11:15 - 12:00	Examine Kits in Science Room			
12:00 - 1:00	Lunch in Cafetorium - Tickets may be purchased in corridor. Price, 35¢			
1:00 - 1:35	Charles Mitchell - Large Group Instruction Room - Process Education			
1:35 - 2:00	Questions: B. Confair - ERIE C. Mitchell - PSUC S. McIntyre - V. Prin.	D. Frenyea - Kdn. B. Barber - 1st Gr. P. Delorm - 2nd Gr. J. Martzinek - 2rd Gr.		

SAMPLE PROGRAM 4

DEMONSTRATION DAY: SCIENCE--A PROCESS APPROACH

J. Henry Cochran Elementary School, Williamsport, Pa.

March 6, 1969

9:00 - 9:25 Registration, Coffee (Cafeteria)

9:25 - 9:30 Words of Welcome - Dr. Clyde Wurster, Superintendent
Williamsport Area School District

9:30 - 10:15 Overview of SAPA - Dr. Lester Kieft
Professor of Chemistry
Bucknell University

10:30 - 11:15 Sample Process Lessons

Group I Mrs. Hoffman
Group II Miss Wright

11:15 - 12:00 Reaction Session - Dr. Kieft, Miss Wright, Mrs. Hoffman

12:00 - 12:30 Local In-Service for SAPA - Mr. McCarthy
Science Supervisor
Williamsport Area Schools

12:30 - 1:00 Area J Involvement - Mr. Hoxie, Director, Area J, Title III Office, Lock Haven

1:00 - 2:00 Lunch 50¢ (Cafeteria)

2:00 - 2:45 Demonstration Lessons (Kindergarten through 4th Grade)

2:45 - 3:15 Question and Answer Period -
Mrs. Hoffman - Kindergarten
Mrs. Gordon - First Grade
Mrs. Rosser - Second Grade
Miss Wright - Third Grade
Mrs. Bower - Fourth Grade

SAMPLE PROGRAM 5

T E N T A T I V E S C H E D U L E

DIFFUSION DAY - SHAMOKIN AAAS WORKSHOP
Friday, February 28, 1969

MORNING SESSION

Elks Lodge, 222 E. Independence, Shamokin, Pa.

9:00 - 9:30	Registration-Coffee-Survey of Relevant Materials.
9:30 - 11:30	Welcome and Introduction of Guests (Mr. Lyman Weaver).
	Demonstration and Rationale (Dr. Lester Kieft).
	Explanation of Hierarchy Chart.
	Discussion and Display of Equipment.
	Movie of Washington School Teachers and Students.
11:40 - 12:30	Lunch.

AFTERNOON SESSION

Washington School, Shamokin, Pa.

1:00 - 1:30	Classroom Demonstrations by Teachers and Students Grades K-4.
1:30 - 2:00	Demonstrations of Testing Procedures by Teachers and Students - Grades K-4.
2:00 - 2:30	Panel Response to Participant Questions --
	Dr. McIlwaine - ERIE Science Consultant
	Dr. Kieft - Bucknell Univ. Science Dept. Chairman
	Mr. Weaver - Principal, Washington School
	Miss Ehret, Miss Grow, Miss Savidge, Mrs. Pokorny, Mrs. Shutt — Teachers Science-- A Process Approach

Sample Program 6

OVERLOOK ELEMENTARY SCHOOL

SCIENCE--A PROCESS APPROACH

DEMONSTRATION DAY

Wednesday, March [illegible], 1970

9:30 A.M.

Introductions	Dr. Fred Krause Assistant County Superintendent
General Orientation to S-APA and Its Role in Science Education	Mr. James Currie Assistant Professor of Education Duquesne University
Science--A Process Approach The Lesson Plan, Process Skills, and Sequential Development	Howard Robertson, Principal Overlook Elementary School

AN OUTLINE FOR DISCUSSION

THE ROLE OF EACH COMPONENT

	TEACHER	PUPIL	MATERIAL
Behavioral Objectives			
Activities			
Appraisal			
Competency Measure			

Program 6 (cont'd)

SCHEDULE FOR VISITATIONS

10:30	Kindergarten Mrs. Laslo Group A	Grade 1 Mrs. Breen Group B	Grade 2 Miss Quinette Group C	Grade 3 Mrs. Ross Group D	Grade 4 Mrs. Erbe Group E
11:15	May remain in room and talk to the teacher.	May view a competency measure being administered.	May go to the auditorium to talk with the teacher.	May remain in the room and talk to the teacher.	May remain in the room and talk to pupils.

During any free time in the schedule please survey the materials available in the auditorium. Read a complete lesson plan from a kit. Study the contents of some of the material boxes.

Have a cup of coffee in the kitchen.

Lunch on your own. See map included in your materials.

1:15	Kindergarten Miss Mentch Group C	Grade 1 Mrs. Kent Group D	Grade 2 Mrs. Pollak Group E	Grade 3 Mrs. Coulter Group A	Grade 4 Mr. Jaszcar Group B
	May go to the auditorium and talk with teacher and view competency measure.	May remain in room and view a competency measure being administered.	Talk to the pupils and go to the auditorium.	May remain in room and talk with pupils. Also view a competency measure.	May remain in room and talk with pupils.
2:30 - 3:50	PANEL DISCUSSION ***** QUESTION AND ANSWER PERIOD Mr. Jaszcar Mr. Robertson Mrs. Pollak Mr. Sanford Miss Gibson				

Thank you very much for attending. Perhaps we will have the opportunity of visiting your school district in the near future.

Participant Evaluation

Teachers and administrators visiting a school to examine a new curriculum in operation should be asked to evaluate the demonstration program. Candid comments by participants can lead to better organization and implementation of meetings in the future.

The Title III Centers which played a major role in the promotion of 14 demonstration days in 1968-69 generally assumed responsibility for the preparation of an evaluation form. The form was completed by visitors just prior to their departure from the demonstration school. Two such forms follow.

SAMPLE EVALUATION FORM 1

CONFERENCE EVALUATION FORM

Conference Date: Friday, February 28, 1969 .

Place: Shamokin Area Schools - Washington School

THE VALUE OF THIS CONFERENCE IS IN THE QUALITY OF SERVICE AND/OR IDEAS IT PROVIDES YOU. TO HELP THIS CONFERENCE AND TO HELP IMPROVE UPON IT WHEN OTHER CONFERENCES ARE HELD, WE WOULD LIKE YOUR REACTIONS TO THE FOLLOWING:

1. Did the conference provide you with pertinent information or ideas that you <u>might</u> be able to implement?

   Not at all _____
   Somewhat _____
   Reasonably Well _____
   Very Helpful _____

2. Did the conference add to the knowledge you already had of the area covered in the conference?

   Not at all _____
   Somewhat _____
   Reasonably Well _____
   Very Helpful _____

3. Do you believe that this conference would be valuable to your peers in other parts of the state?

   Yes _____
   No _____

4. If the following provisions were made for the meeting, please rate their value overall.

   a. Consultant(s)
      Poor _____
      Fair _____
      Good _____
      Excellent _____

Evaluation Form 1 (Cont'd)

4. b. Materials

Poor	_____
Fair	_____
Good	_____
Excellent	_____

c. Meeting format

Poor	_____
Fair	_____
Good	_____
Excellent	_____

d. Classroom Observations

Poor	_____
Fair	_____
Good	_____
Excellent	_____

5. Would you recommend that your school send other staff members to another meeting of this type if it were offered?

Yes	_____
No	_____

6. Please rate the conference, in its totality, on the following nine point scale. (Circle one number.)

1	2	3	4	5	6	7	8	9
Very Poor		Poor		Satisfactory		Good		Excellent

7. Additional Comments:

_____

_____

_____

_____

_____

_____

_____

_____

SAMPLE EVALUATION FORM 2

NORTHEAST REGIONAL SUPPLEMENTARY EDUCATIONAL CENTER
8 South Platt St. Plattsburgh, New York
518-561-1231

Joseph E. Allen
Regional Director
*
Frederick D. Arce
Associate Director
*
W. Harney Davey
Associate Director

CONFERENCE EVALUATION FORM
SCIENCE--A PROCESS APPROACH

Conference Date: Tuesday, February 18, 1969

Place: Ticonderoga Elementary School

The value of this conference is in the quality of service and/or ideas it provides you. To help the Center assess this conference and to help improve upon it when other conferences are held, we would like your reactions to the following:

1. Did the conference provide you with pertinent information or ideas that you might be able to implement?

Not at all	_____
Somewhat	_____
Reasonably Well	_____
Very Helpful	_____

2. Did the conference add to the knowledge you already had of the area covered in the conference?

Not at all	_____
Somewhat	_____
Reasonably Well	_____
Very Helpful	_____

3. Do you believe that this conference would be valuable to your peers in other parts of the Region the Center serves?

Yes	_____
No	_____

Evaluation Form 2 (Cont'd)

5. Would you recommend that your school send other staff members to another meeting of this type if it were offered?

Yes ____
No ____

6. Please rate the conference, in its totality, on the following nine point scale. (Circle one number.)

1	2	3	4	5	6	7	8	9
Very Poor		Poor		Satisfactory		Good		Excellent

7. To what extent did the conference meet your overall expectations? (Circle one number.)

1	2	3	4	5	6	7	8	9
Very Poor		Poor		Satisfactory		Good		Excellent

8. Additional Comments:

Evaluation Form 2 (Cont'd)

If yes, please suggest any changes we should incorporate next time.

_____

_____

_____

_____

If no, please suggest a substitute you have in mind.

_____

_____

_____

_____

(Use back of page if more space is needed.)

4. If the following provisions were made for the meeting, please rate their value overall.

a.	Consultant(s)	Poor	_____
		Fair	_____
		Good	_____
		Excellent	_____
b.	Materials	Poor	_____
		Fair	_____
		Good	_____
		Excellent	_____
c.	Meeting space	Poor	_____
		Fair	_____
		Good	_____
		Excellent	_____
d.	Meeting format	Poor	_____
		Fair	_____
		Good	_____
		Excellent	_____

Follow-Up Assessment

What happens in area schools after a demonstration day? An important evaluation task is to determine in how many classrooms in how many schools an innovative curriculum is introduced after being inspected and discussed by demonstration day participants. Data relevant to this question can be obtained through follow-up letters, telephone calls, personal visits to district central offices, careful scrutiny of the rosters for inservice education workshops, and even through conversation with regional salesmen for equipment vendors.

The Institute plans to investigate the number and size of new curriculum installations motivated, at least in part, by 1968-69 demonstration day activities. Extremely valuable data now exist from which the impact of on-site demonstrations may be inferred. For example, a number of Pennsylvania schools now part of ERIE's Demonstration School Network said they became convinced of the value of Science--A Process Approach after participating in demonstration day programs. Five schools in the Corning (N.Y.) area instituted trial Science--A Process Approach classrooms in 1969-70 as a result of the persuasive influence of Calvin U. Smith Elementary School teachers. ERIE organized and coordinated three large K-3 workshops for Science--A Process Approach aspirants during August, 1969. A large number of

teachers from schools in the 14 regions where demonstration days were conducted obtained registration fee funds from their districts and attended a full five days of process science inservice education.

OUTSIDE RESOURCES FOR A DEMONSTRATION DAY ON SCIENCE--A PROCESS APPROACH

A variety of outside resources exist which may prove helpful to the person responsible for planning and conducting a demonstration day for Science--A Process Approach. These resources are listed in sections below as follows: Agencies, 1968-69 Demonstration Day Schools, RAN Consultants, Sources of Handout Materials, and Bibliography.

Agencies

American Association for the
Advancement of Science
Commission on Science Education
1515 Massachusetts Avenue, N.W.
Washington, D.C. 20005
John R. Mayor, Director

Eastern Regional Institute for Education (ERIE)
635 James Street
Syracuse, New York 13203
James M. Mahan, Coordinator, Curriculum
Installation Group
Roger Ming, Associate Director, Regional
Action Network

Regional Action Network
(50 university professors trained by ERIE to assist schools in science education improvement efforts)
Names and institutional addresses follow.

Regional Title III Center
(In the local area)

Xerox Corporation
Education Division SB
600 Madison Avenue
New York, New York 10022
Steven Doppelt, New York Representative
James McGrody, Pennsylvania Representative

1968-69 Demonstration Day Schools

Abraham Lincoln Elementary School
1524 Hamilton Road
Pittsburgh, Pennsylvania 15234
Vance Sanford, Principal

Allegheny County Schools
345 County Office Bldg.
Pittsburgh, Pennsylvania 15219
Fred C. Krause
Assistant Superintendent

Calvin U. Smith Elementary School
Stanton Street Extension
Painted Post, New York 14870
Donald Mahon, Principal

C.C. Ring Elementary School
400 Buffalo Street
Jamestown, New York 14701
John Carlson, Principal

Fairview Elementary School
45 Chestnut Street
Fairview, Pennsylvania 16415
William Straessley, Principal

F.S. Banford Elementary School
State Street
Canton, New York 13617
Robert J. Meldrum, Jr., Principal

General E.S. Otis School #30
36 Otis Street
Rochester, New York 14606
Alexander Johnson, Principal

J. Henry Cochran Elementary School
1500 Cherry Street
Williamsport, Pennsylvania 17701
John E. Dice, Principal

Maple Elementary School
1500 Maple Road
Williamsville, New York 14221
Thomas Ahern, Principal

1968-69 Demonstration Day Schools (cont'd)

Overlook Elementary School
Meadowgreen Drive
Pittsburgh, Pennsylvania 15236
Howard Robertson, Principal

Shannock Valley Elementary School
Rural Valley, Pennsylvania 16226
Francis Helm, Principal

Ticonderoga Elementary School
Alexandera Avenue
Ticonderoga, New York 12883
Mabel Hornburg, Principal

Trumansburg Elementary School
Trumansburg No. 2
Trumansb urg, New York 14886
John A. Bourdon, Principal

Washington Elementary School
Sunbury Street
Shamokin, Pennsylvania 17872
Lyman Weaver, Principal

Wellsboro Elementary School
Wellsboro, Pennsylvania 16901
Mahlon Northrop, Principal

Westmere Elementary School
Johnston Road
Albany, New York 12303
James Cleary, Principal

LIST OF RAN CONSULTANTS

NEW YORK

Adrien Adelman, Jr.
State University College
329 Cassidy, 1300 Elmwood
Buffalo, N.Y. 14208

Robert W. Boenig
State University College
Fredonia, N.Y. 14063

Harrie Caldwell
Syracuse University
410 Lyman Hall
Syracuse, N.Y. 13210

Eugene L. Chiappetta
Syracuse University
410 Lyman Hall
Syracuse, N.Y. 13210

John E. Czirr
Syracuse University
410 Lyman Hall
Syracuse, N.Y. 13210

G. Raymond Fisk
State University College
Cortland, N.Y. 13045

Tom Fitzgibbons
Keuka College
Keuka Park, N.Y. 14478

John A. Glenzer
State University College
Old Main
Fredonia, N.Y. 14063

Colleen M. Gorman
Keuka College
Keuka Park, N.Y. 14478

Frank Gray
Briarcliff College
Briarcliff Manor, N.Y. 10510

Carl G. Gustafson
The King's College
Briarcliff Manor, N.Y. 10510

Harvey Inventasch
State University College
Cortland, N.Y. 13045

Lawrence J. Kiely
Niagara University
Niagara Univ., N.Y. 14109

Howard Litvack
Adelphi University
Garden City, N.Y. 11530

Richard E. McBride
State University College
Main Building 200A
New Paltz, N.Y. 12561

Donald F. McFarland
State University College
Fredonia, N.Y. 14063

John F. McGrath
College of St. Rose
Albany, N.Y. 12203

Leland K. Manske
State University College
Potsdam, N.Y. 13676

Joseph G. Marsico
State University College
Blake C119
Geneseo, N.Y. 14454

Charles W. Mitchell
State University College
Education Research &
Demonstration Center
Plattsburgh, N.Y. 12901

Jerome J. Notkin
Hofstra University
Hempstead, N.Y. 11550

Raymond T. O'Donnell
State University College
Oswego, N.Y. 13126

Russell C. Oakes
State University College
Geneseo, N.Y. 14454

James P. Pratt
Mount St. Mary College
Newburgh, N.Y. 12550

Donald G. Russ
State University College
Oneonta, N.Y. 13820

Clarence R. Trexler
State University College
Oswego, N.Y. 13126

Ralph M. Watson, Jr.
Cazenovia College
Cazenovia, N.Y. 13035

Paul A. Young
Canisius College
Buffalo, N.Y. 14208

PENNSYLVANIA

Joseph T. Bellucci
Wilkes College
Wilkes-Barre, Pa. 18073

Barbara J. Burkhouse
Marywood College
Scranton, Pa. 18509

Dale E. Cooper
Lock Haven State College
Ulmer Hall, LHSC
Lock Haven, Pa. 17745

James F. Currie
Duquesne University
Pittsburgh, Pa. 15219

Jay Frank Davidson
Shippensburg State College
Box 508
Shippensburg, Pa. 17257

Lester A. Giles, Jr.
Wilson College
Chambersburg, Pa. 17201

M. Raymond Jamison
Lycoming College
Box 68
Williamsport, Pa. 17701

Lester Kieft, Jr.
Bucknell University
Lewisburgh, Pa. 17837

Ronald A. Larson
Edinboro State College
Room 225 Electronics Bldg.
Edinboro, Pa. 16412

Anthony Lazzaro
California State College
California, Pa. 15419

Peter P. Libra
Mercyhurst College
501 E. 38th Street
Erie, Pa. 16501

William McIlwaine
Millersville State College
Millersville, Pa. 17551

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Gwynedd Valley, Pa. 19437

Richard F. Mason
Mansfield State College
Mansfield, Pa. 16933

Daniel Overheim
Edinboro State College
Edinboro, Pa. 16412

Wayne Ransom
Temple University
Philadelphia, Pa. 19122

James D. Shofestall
Clarion State College
Clarion, Pa. 16214

William Torop
St. Joseph's College
City Avenue at 54th Street
Philadelphia, Pa. 19131

William A. Uricchio
Carlow College
3333 Fifth Avenue
Pittsburgh, Pa. 15213

Richard F. Waechter
Indiana University of Pa.
Indiana, Pa. 15701

Paul R. Widick
West Chester State College
West Chester, Pa. 19380

Robert E. Ziegler
Elizabethtown College
Elizabethtown, Pa. 17022

Sources of Handout Materials

1. Science--A Process Approach: Purposes, Accomplishments, Expectations. Prepared by Dr. Robert M. Gagné. (A 17-page booklet describing this process-oriented curriculum. Contains list of important references.) American Association for the Advancement of Science Miscellaneous Publication 67-12, September, 1967.

   Suggestion: This booklet could be mailed to demonstration day registrants in advance of their school visitation. A reading prior to the visitation will place process-oriented instruction in context and stimulate a series of important questions.

2. How to Utilize the Services of a Science Consultant By Dr. Kenneth D. George. (A six-page article obtainable from the National Science Teachers Association, 1201 16th Street, N.W., Washington, D.C. 20036. How To Do It Pamphlet Series stock number 471-14286. (Cost: $28 per copy for 10 or more copies.)

3. Science--A Process Approach: The Totally New Approach to Teaching Science in Grades K-6. A free, 15-page booklet prepared by the Xerox Corporation, the vendor officially approved by the American Association for the Advancement of Science as producer of Science--A Process Approach equipment. Xerox Education Division, 600 Madison Avenue, New York, New York 10022.

4. Price List: Science--A Process Approach (Prices for science kits and teacher guides per each grade level and associated order code numbers). Xerox Education Division, 600 Madison Avenue, New York, New York 10022.

5. Films of Science--A Process Approach Instruction. Films displaying process-oriented science instruction for various elementary school grade levels are available on a loan basis from the American Association for the Advancement of Science.

6. Miscellaneous reprints of articles on Science--A Process Approach. Available to ERIE affiliated schools for demonstration day activities.

7. Commission on Science Education Newsletter. Prepared by the American Association for the Advancement of Science, 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005. (Published Periodically) Volume 5, Number 2, July 1969.

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Science--A Process Approach. Parts A-E. New York: Xerox Education Division, 1967-68. (Parts F and A, 1970)

Science--A Process Approach. Process Hierarchy Chart. New York: Xerox Education Division, 1967.

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Walbesser, H.H. Science curriculum evaluation: observations on a position. The Science Teacher, 1966, 33, 34-39.

Walbesser, H.H. & Carter, H.L. Acquisition of elementary science behavior by children of disadvantaged families. Educational Leadership, 1968, 25 (8), 741-748.